

Burke County Natural Areas Inventory

SMITH CLIFF/HENRY FORK RIVER Significant Natural Heritage Area

Site Significance: Regional
Quadrangle: Valdese

Size: 192 acres
Ownership: Private

SIGNIFICANT FEATURES: The site contains geomorphic features, such as a prominent ingrown river meander and cliff system, that are rare in the Piedmont. Communities include good examples of Chestnut Oak Forest, the uncommon Pine--Oak/Heath, and the rare Piedmont/Coastal Plain Acidic Cliff. Small populations of the State and Federally Threatened dwarf-flowered heartleaf (*Hexastylis naniflora*), the State Candidate/Federal Species of Concern sweet pinesap (*Monotropsis odorata*), and the State Candidate Bradleys' spleenwort (*Asplenium bradleyi*) are present. The uncommon beargrass (*Xerophyllum asphodeloides*) and roundleaf ragwort (*Packera obovata*), Watch List plant species, are also present.

LANDSCAPE RELATIONSHIPS: Although the site lies among the fairly undeveloped areas northeast of the South Mountains, it is bordered on the south by scattered residential and agricultural clearings along the Henry Fork River and on the west by cleared areas along NC Highway 18. The Yellow Mountain\Ironmonger Mountain site is about 1.5 air miles to the northwest. The Simms Hill--Little River Uplands site is about 2.5 air miles to the southwest. South Mountains Jacob Fork Watershed and South Mountains State Park are about 3.0 air miles to the southwest.

SITE DESCRIPTION: Smith Cliff is a steep exposure of coarse sillimanite-bearing mica schists and pegmatites on the outside bend of a prominent ingrown meander in the Henry Fork River. The cliff, which has vertical relief of about 200 feet from base to top, is a good example of a Piedmont/Coastal Plain Acidic Cliff community. Good quality examples of Chestnut Oak Forest occur on slopes lateral to the cliff and on the crest above it. Small but good quality Pine--Oak/Heath woodlands are embedded in the Chestnut Oak Forests on the crest. More disturbed, lower quality hardwood forest and alluvial forest communities border the cliff on lower slopes and along the Henry Fork River.

The steep, south-facing slopes on which the cliff occurs extend along the Henry Fork for about 0.2 mile. The open, steeply-sloping cliffs consist of scattered rocky outcroppings interspersed by islands of thin soil. Many areas are devoid of vegetation. Trees such as chestnut oak (*Quercus montana*), Virginia pine (*Pinus virginiana*), sourwood (*Oxydendrum arboreum*), and black gum (*Nyssa sylvatica*) are scattered the dry, acidic soils of the slopes. Blackjack oak (*Quercus marilandica*) is less frequent. Shrubs such as gorge rhododendron (*Rhododendron minus*), mountain laurel (*Kalmia latifolia*), dryland blueberry (*Vaccinium pallidum*), and St. John's-wort (*Hypericum* sp.) are widely scattered. Herbs are sparse, but include kidneyleaf rosinweed (*Silphium compositum* var. *reniforme*), galax (*Galax urceolata*), trailing arbutus (*Epigaea repens*), pipsissewa (*Chimaphila maculata*), downy yellow oakleach (*Aureolaria laevigata*),